3DVC_Purple2_ClinicalRequirements

Scribe: Gretchen Yerke

Notes from discussion, purple 2, clinical requirements

Clinician involvement

- questions
  - time horizon for applicability
- erich huang: involved in cancer, now at sage, trained as a surgeon
  - people make models that hit performance metrics, but are never going to change a clinical decision
  - clinicians don't want to take the time to talk to the basic biologists
  - there need to be interface people who understand both worlds, computational people and clinicians, to act as intermediaries
- susan taylor, ucsd
  - need to educate on both sides so they can understand each other
  - need a scientific problem to drive us. take cancer
    - how do we go from mutations to understanding a person's cancer and making clinical decisions
- erich: tcga: clinical outcome data is missing from this database
- gareth: no one has time to become an expert in the other's field
- blake: initiatives and goals have to come from high-level collaborations and discussions: what's possible and what's needed most
- susan: need multidisciplinary teams working on these problems
- gareth: it's hard to get a full time long term bioinformatician in an experimental lab: can't hire people that can build you a system and be there for 10 years
- applications of the 3d model to medical questions:
  - erich: if we can model perturbations and their outcomes, that's obviously huge
  - blake: that may not be a primary goal of the initial version of the 3d cell: probably won't be able to simulate adding a drug and have the cell simulate its effects on physiologically-relevant endpoints
  - don: the cardiomyocytes are well grounded in clinical data and provide great models that are useful for clinicians